TD0290 TE598860

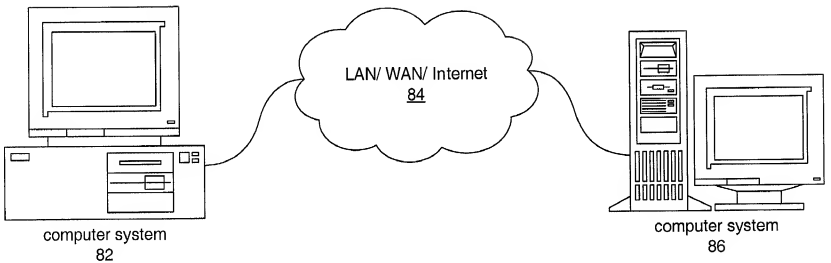

FIG.1

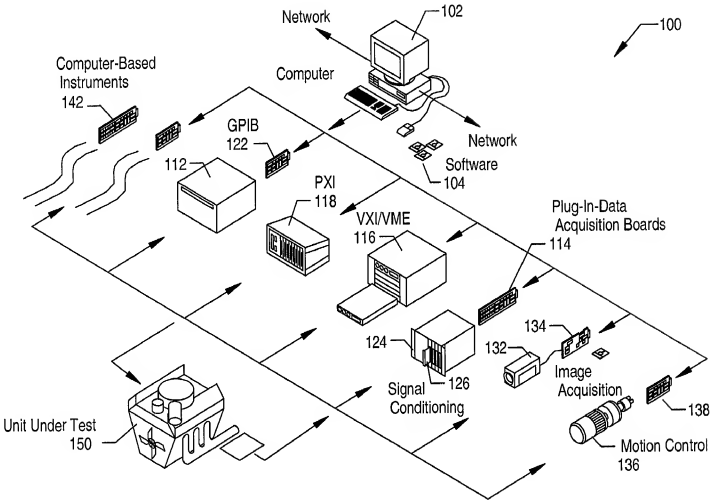
Network
102
100
Computer-Based
Instruments
142
Computer
GPIB
122
Network
112
Software
104
PXI
118
VXI/VME
116
Plug-In-Data
Acquisition Boards
114
134
124
132
Image
Acquisition
Signal
Conditioning
126
138
Unit Under Test
150
Motion Control
136

FIG. 2A

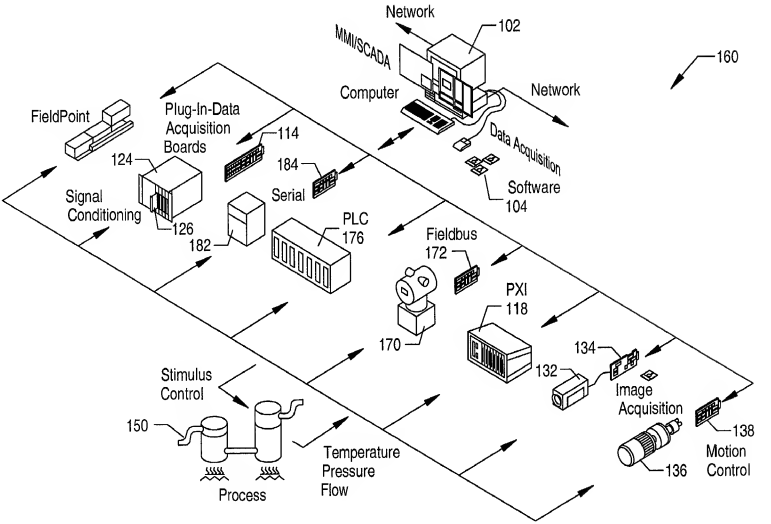
Network
MMI/SCADA
102
160
Computer
Network
FieldPoint
Plug-In-Data Acquisition Boards
114
Data Acquisition
124
184
Software
104
Signal Conditioning
Serial
126
182
PLC
176
Fieldbus
172
PXI
118
170
134
132
Image Acquisition
Stimulus Control
150
138
Motion Control
136
Temperature
Pressure
Flow
Process

FIG. 2B

T00290 "TE598860

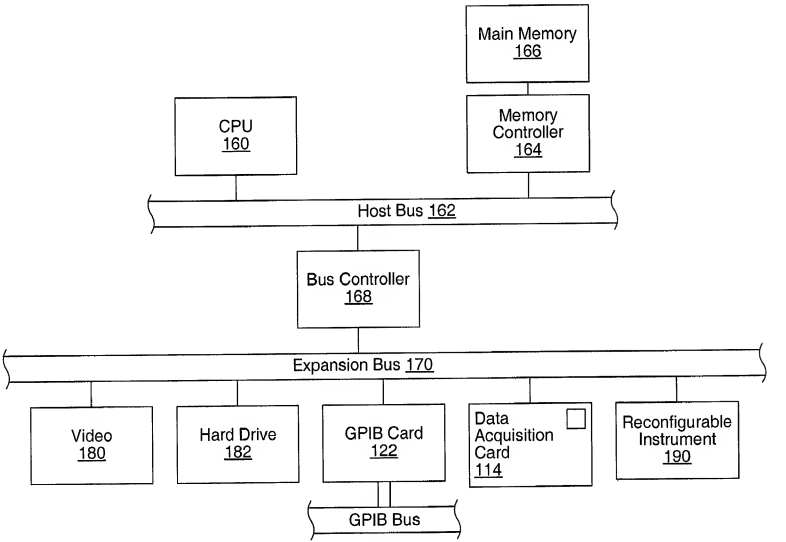

FIG. 3

Adobe-3600-1504

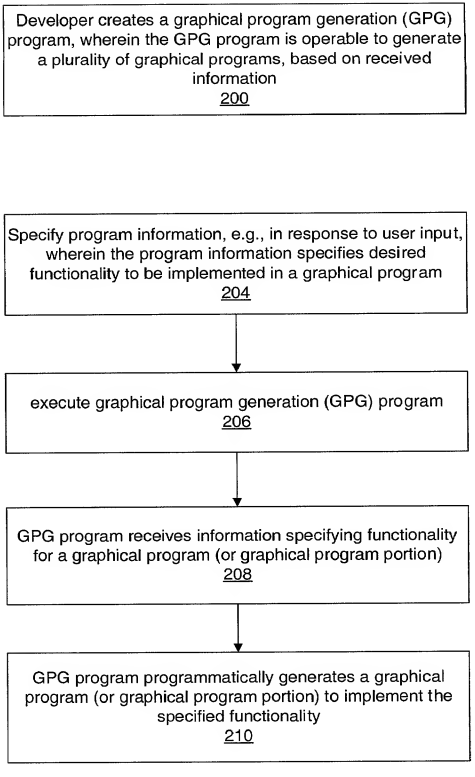

FIG. 4

T00290 TES98860

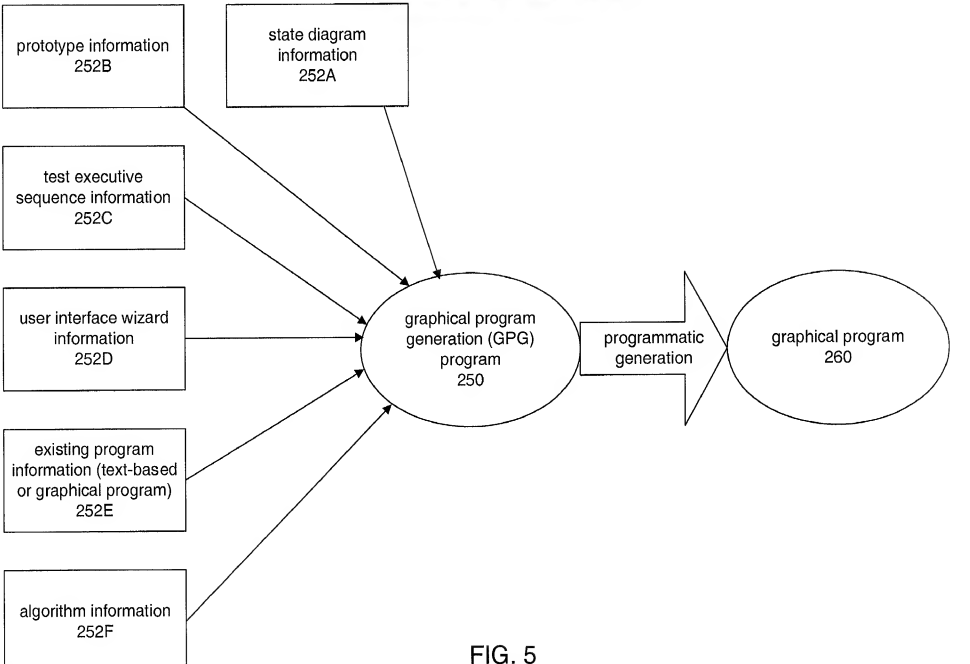

FIG. 5

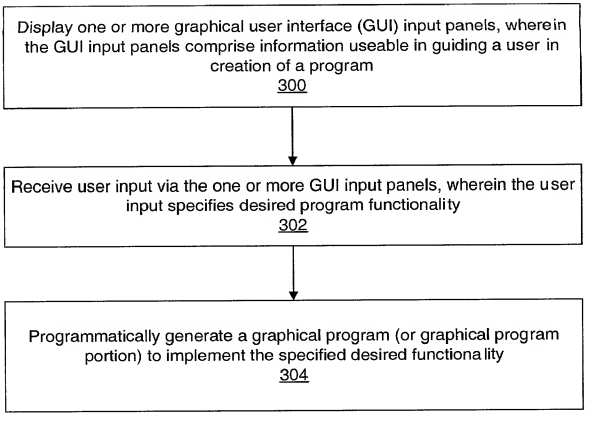
Display one or more graphical user interface (GUI) input panels, wherein the GUI input panels comprise information useable in guiding a user in creation of a program
300
Receive user input via the one or more GUI input panels, wherein the user input specifies desired program functionality
302
Programmatically generate a graphical program (or graphical program portion) to implement the specified desired functionality
304

FIG. 6

U.S. Patent No. 6,986,105

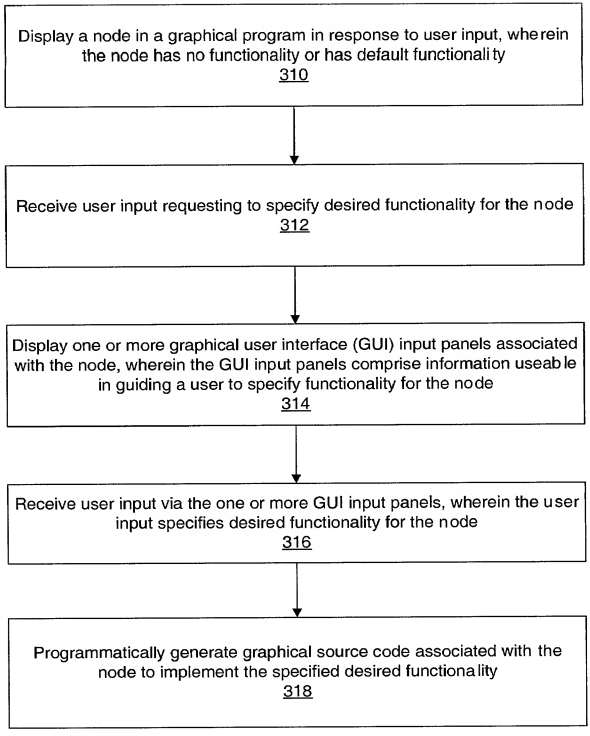

FIG. 7

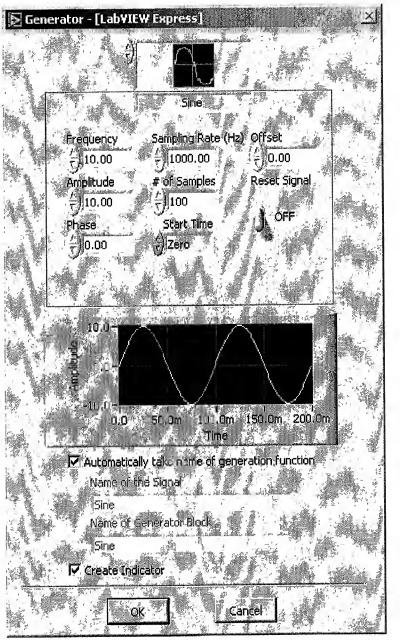
Generator - [LabVIEW Express]
Sine
Frequency
10.00
Sampling Rate (Hz)
1000.00
Offset
0.00
Amplitude
10.00
# of Samples
100
Reset Signal
OFF
Phase
0.00
Start Time
Zero
10.0
0.0
-10.0
0.0
50.0m
100.0m
150.0m
200.0m
Time
Automatically take name of generation function
Name of the Signal
Sine
Name of Generator Block
Sine
Create Indicator
OK
Cancel

FIG. 8

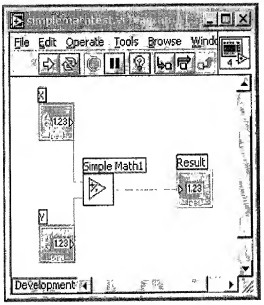

FIG. 9

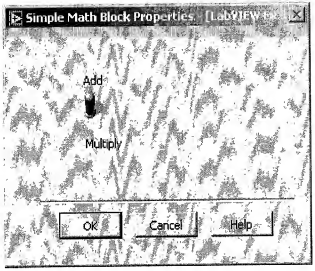

FIG. 10

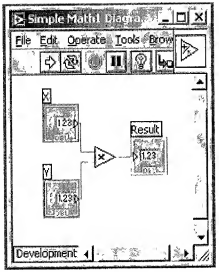

FIG. 11

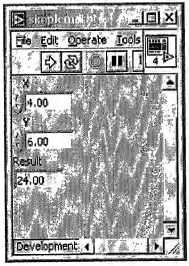

FIG. 12

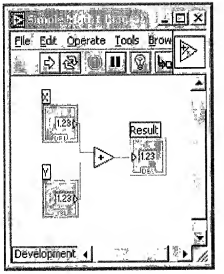
File Edit Operate Tools Brow
X
123
Result
123
Y
123
Development

FIG. 13

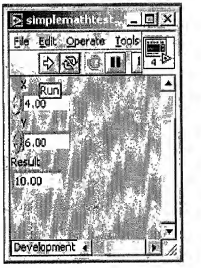
simplemathtest
File Edit Operate Tools
Run
X
4.00
Y
6.00
Result
10.00
Development

FIG. 14

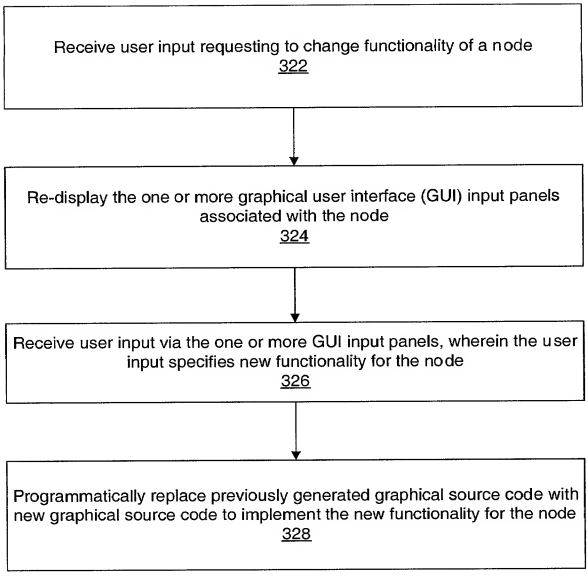
Receive user input requesting to change functionality of a node
322
Re-display the one or more graphical user interface (GUI) input panels associated with the node
324
Receive user input via the one or more GUI input panels, wherein the user input specifies new functionality for the node
326
Programmatically replace previously generated graphical source code with new graphical source code to implement the new functionality for the node
328

FIG. 15

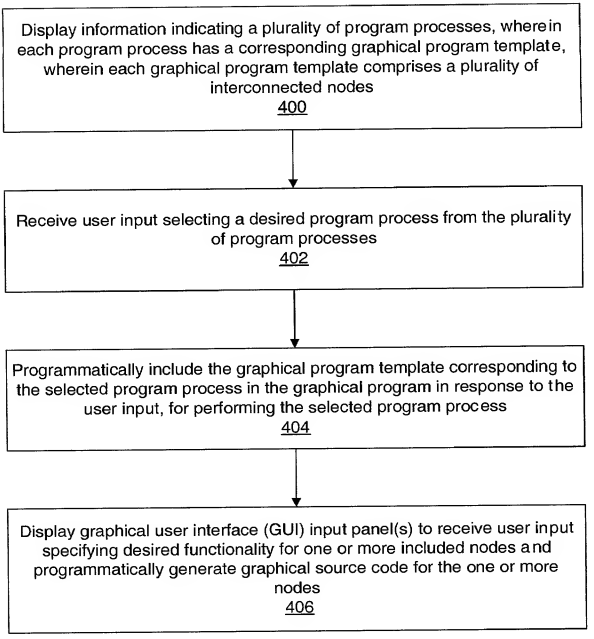
Display information indicating a plurality of program processes, wherein each program process has a corresponding graphical program template, wherein each graphical program template comprises a plurality of interconnected nodes
400
Receive user input selecting a desired program process from the plurality of program processes
402
Programmatically include the graphical program template corresponding to the selected program process in the graphical program in response to the user input, for performing the selected program process
404
Display graphical user interface (GUI) input panel(s) to receive user input specifying desired functionality for one or more included nodes and programmatically generate graphical source code for the one or more nodes
406

FIG. 16

P00290 TES99860

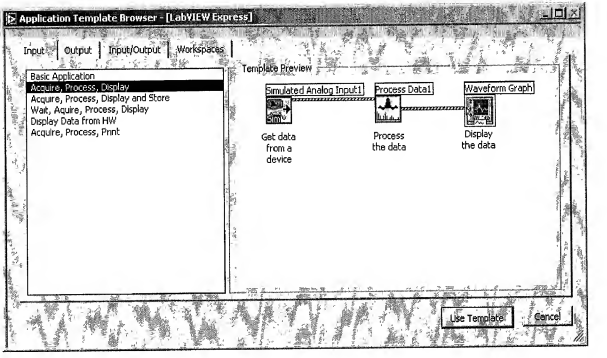

FIG. 17

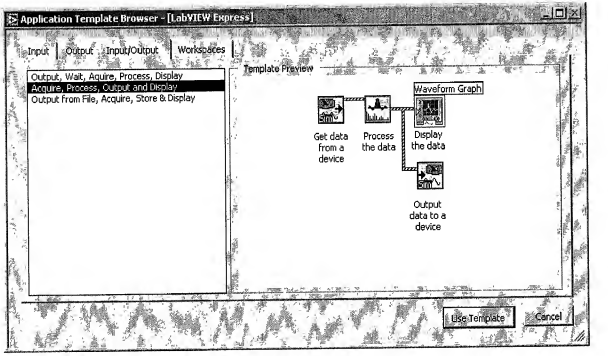
Application Template Browser - [LabVIEW Express]
Input
Output
Input/Output
Workspaces
Output, Wait, Aquire, Process, Display
Acquire, Process, Output and Display
Output from File, Acquire, Store & Display
Template Preview
Waveform Graph
Get data from a device
Process the data
Display the data
Output data to a device
Use Template
Cancel

FIG. 18

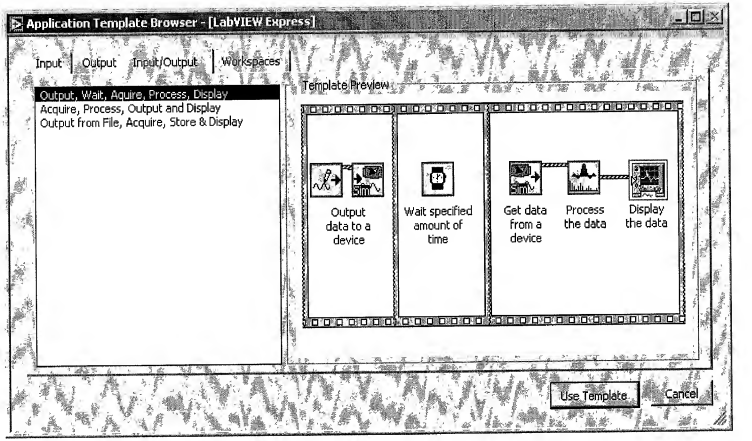
Application Template Browser - [LabVIEW Express]
Input
Output
Input/Output
Workspaces
Output, Wait, Aquire, Process, Display
Acquire, Process, Output and Display
Output from File, Acquire, Store & Display
Template Preview
Output data to a device
Wait specified amount of time
Get data from a device
Process the data
Display the data
Use Template
Cancel

FIG. 19

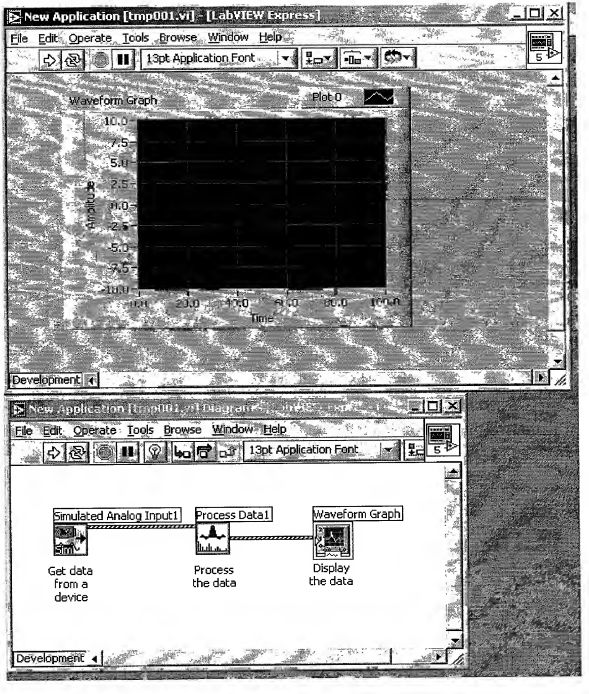
New Application [tmp001.vi] - [LabVIEW Express]
File Edit Operate Tools Browse Window Help
13pt Application Font
Waveform Graph
Plot 0
Amplitude
Time
Development
New Application [tmp001.vi Diagram]
File Edit Operate Tools Browse Window Help
13pt Application Font
Simulated Analog Input1
Process Data1
Waveform Graph
Get data from a device
Process the data
Display the data
Development

FIG. 20

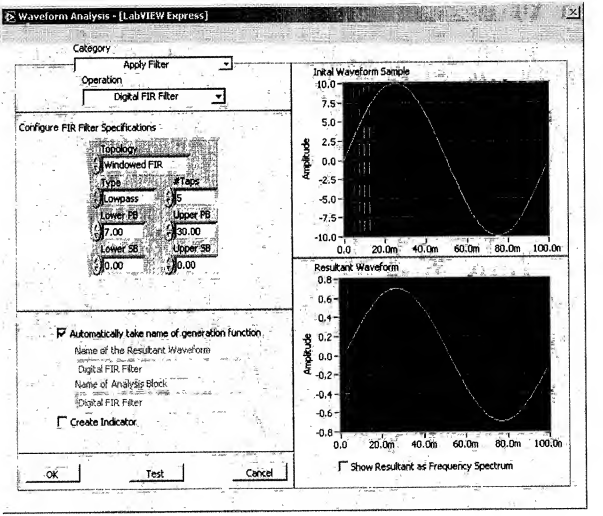
Waveform Analysis - [LabVIEW Express]
Category
Apply Filter
Operation
Digital FIR Filter
Configure FIR Filter Specifications
Topology
Windowed FIR
Type
Lowpass
#Taps
5
Lower PB
7.00
Upper PB
30.00
Lower SB
0.00
Upper SB
0.00
Automatically take name of generation function
Name of the Resultant Waveform
Digital FIR Filter
Name of Analysis Block
Digital FIR Filter
Create Indicator
OK
Test
Cancel
Inital Waveform Sample
Amplitude
Resultant Waveform
Amplitude
Show Resultant as Frequency Spectrum

FIG. 21

Tecan Exhibit 1006

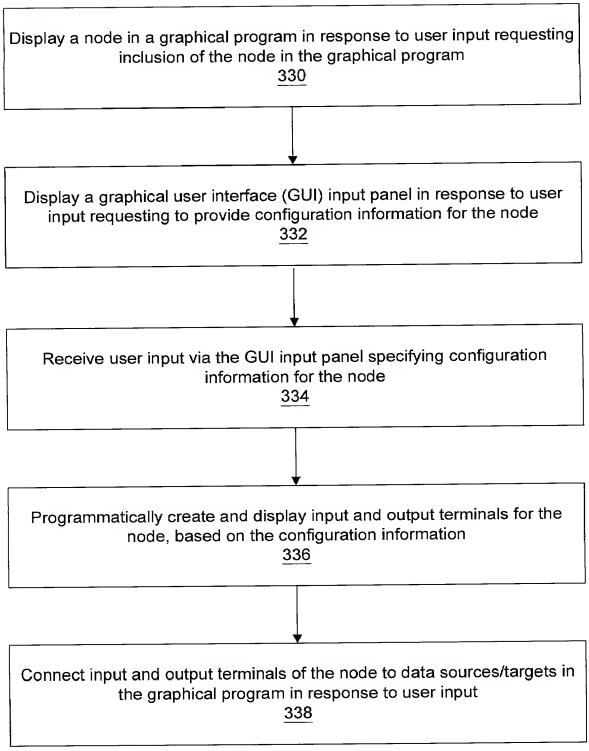

FIG. 22

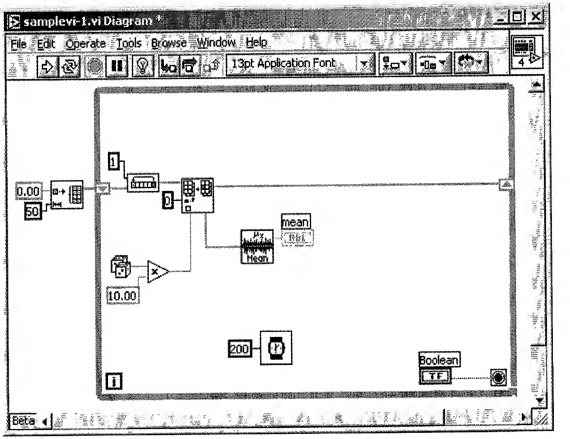

FIG. 23
(PRIOR ART)

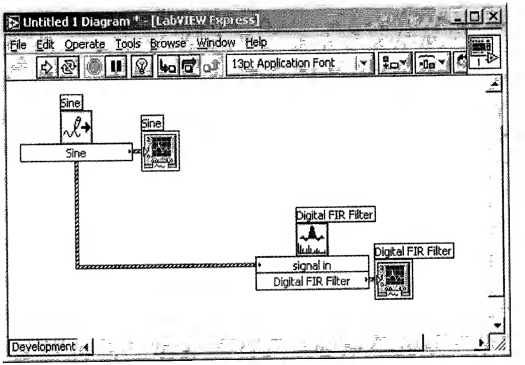
Untitled 1 Diagram * [LabVIEW Express]
File Edit Operate Tools Browse Window Help
13pt Application Font
Sine
Sine
Sine
Digital FIR Filter
Digital FIR Filter
signal in
Digital FIR Filter
Development

FIG. 24

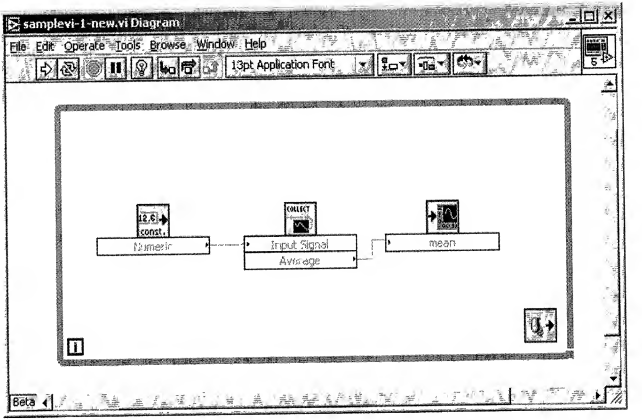
samplevi-1-new.vi Diagram
File Edit Operate Tools Browse Window Help
13pt Application Font
12.0
const.
Numeric
COLLECT
Input Signal
Average
mean
1
Beta

FIG. 25

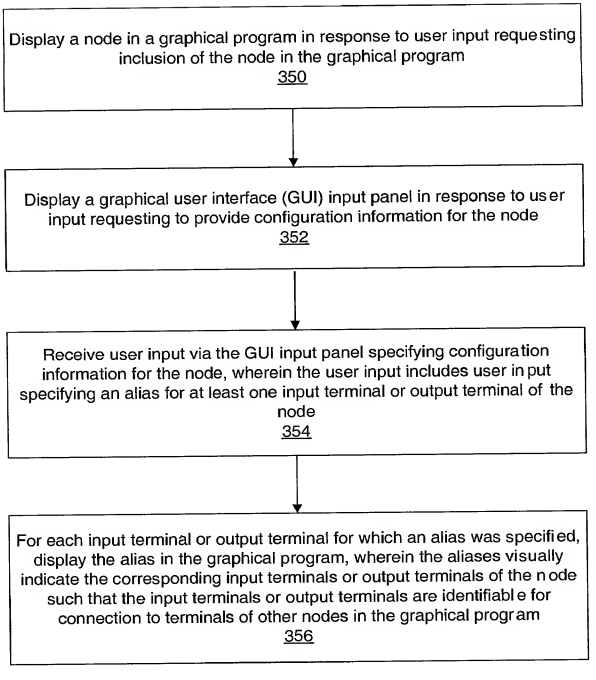
Display a node in a graphical program in response to user input requesting inclusion of the node in the graphical program
350
Display a graphical user interface (GUI) input panel in response to user input requesting to provide configuration information for the node
352
Receive user input via the GUI input panel specifying configuration information for the node, wherein the user input includes user input specifying an alias for at least one input terminal or output terminal of the node
354
For each input terminal or output terminal for which an alias was specified, display the alias in the graphical program, wherein the aliases visually indicate the corresponding input terminals or output terminals of the node such that the input terminals or output terminals are identifiable for connection to terminals of other nodes in the graphical program
356

FIG. 26

FIG. 27

4602-1598646

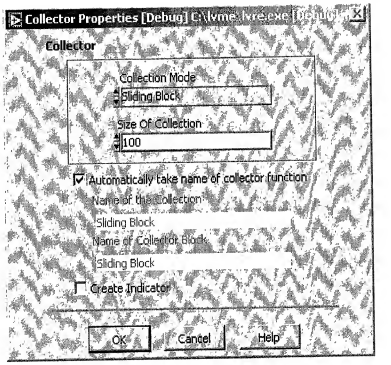
Collector Properties [Debug] C:\lvme_lvrt.exe (Default)
Collector
Collection Mode
Sliding Block
Size Of Collection
100
Automatically take name of collector function
Name of this Collection
Sliding Block
Name of Collector Block
Sliding Block
Create Indicator
OK
Cancel
Help

FIG. 28

FIG. 29

EP 2 290 474 A2

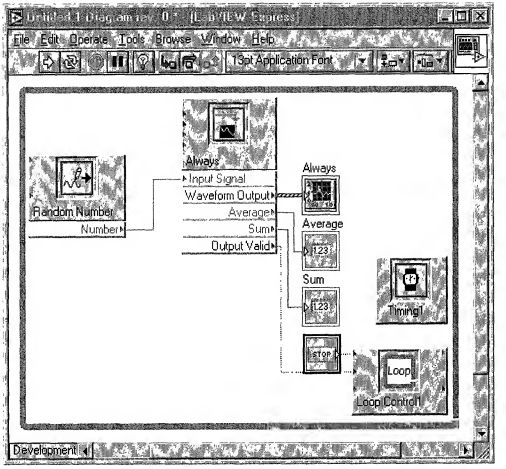
File Edit Operate Tools Browse Window Help
13pt Application Font
Always
Input Signal
Waveform Output
Average
Sum
Output Valid
Random Number
Number
Always
Average
Sum
Timing
stop
Loop
Loop Control
Development

FIG. 30

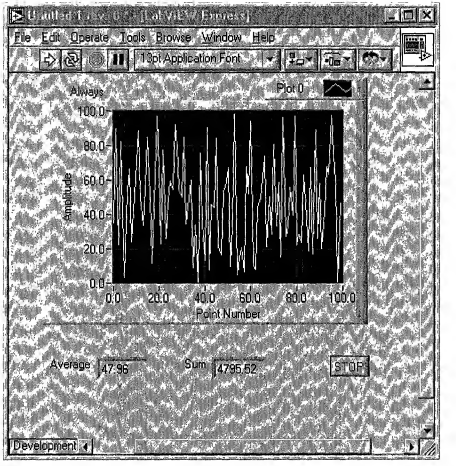
File Edit Operate Tools Browse Window Help
13pt Application Font
Always
Plot 0
100.0
80.0
60.0
40.0
20.0
0.0
Amplitude
0.0 20.0 40.0 60.0 80.0 100.0
Point Number
Average: 47.96
Sum 4796.52
STOP
Development

FIG. 31

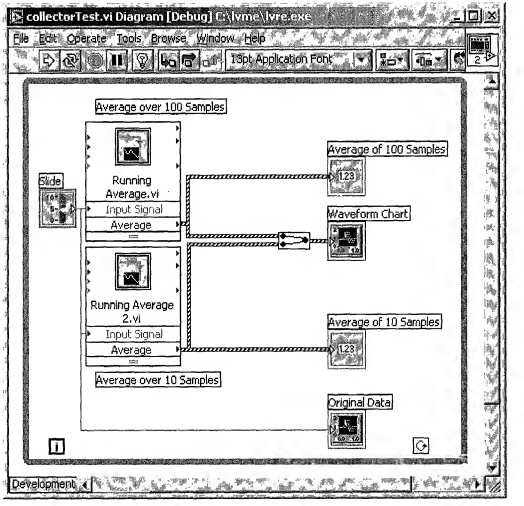
collectorTest.vi Diagram [Debug] C:\lvme\lvre.exe
File Edit Operate Tools Browse Window Help
13pt Application Font
Average over 100 Samples
Slide
Running Average.vi
Input Signal
Average
Average of 100 Samples
Waveform Chart
Running Average 2.vi
Input Signal
Average
Average of 10 Samples
Average over 10 Samples
Original Data
Development

FIG. 32

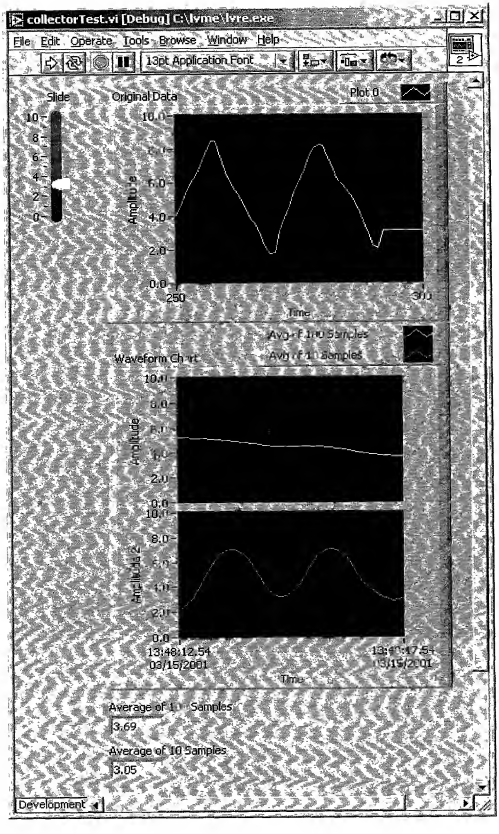
collectorTest.vi [Debug] C:\lvme\lvre.exe
File Edit Operate Tools Browse Window Help
13pt Application Font
Slide
Original Data
Plot 0
Amplitude
Time
Waveform Chart
Avg of 5 and 10 Samples
13:48:12.54
03/15/2001
Average of 10 Samples
3.69
Average of 10 Samples
3.05
Development

FIG. 33

TD0290 TES98860

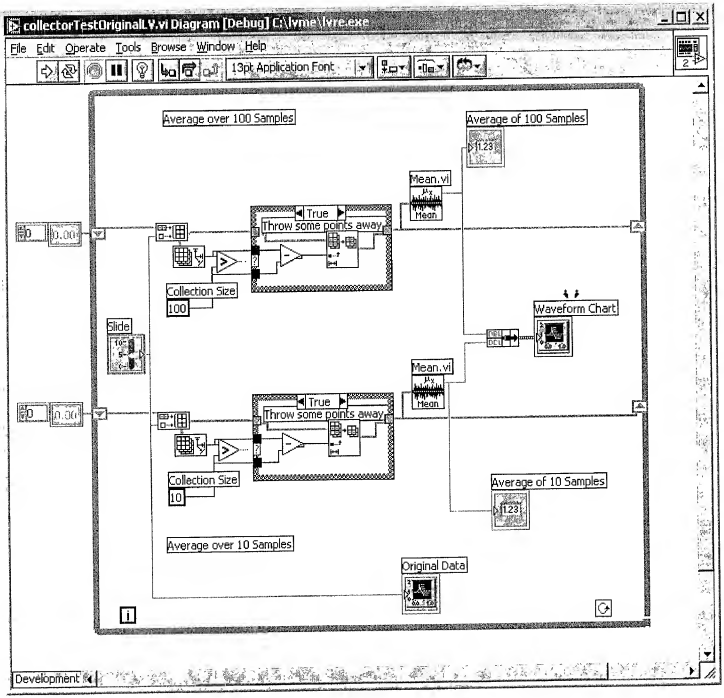

FIG. 34
(PRIOR ART)